



23641

PATENT TRADEMARK OFFICE

Express Mail No. EL 638 690 160 US  
Attorney Docket No. 29595/82582

WHAT IS CLAIMED IS:

1. A fibrous moldable substrate comprising:  
a mat comprising a fibrous material and a binder;  
wherein fibers of the fibrous material are randomly oriented; and  
wherein the fibrous material and binder is subjected to heat such  
that only a portion of the binder is wetted to the fibrous material.
2. The fibrous moldable substrate of Claim 1, wherein the fibrous  
material is hemp.
3. The fibrous moldable substrate of Claim 1, wherein the fibrous  
material is kenaf.
4. The fibrous moldable substrate of Claim 1, wherein the fibrous  
material comprises hemp and kenaf.
5. The fibrous moldable substrate of Claim 4, wherein the fibrous  
material comprises about 50 weight percent hemp and 50 weight percent kenaf.
6. The fibrous moldable substrate of Claim 1, wherein the mat  
comprises about 25 weight percent hemp, about 25 weight percent kenaf and about 50  
weight percent the binder.
7. The fibrous moldable substrate of Claim 1, wherein the binder is a  
thermomelt binder.
8. The fibrous moldable substrate of Claim 7, wherein the binder is  
polypropylene.



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9. The fibrous moldable substrate of Claim 1, wherein the mat comprises about 24.75 weight percent hemp, about 24.75 weight percent kenaf, about 50 weight percent a polypropylene binder material and about 0.05 weight percent maleic anhydride.

10. The fibrous moldable substrate of Claim 1, wherein the mat is subjected to a compression force where its cross-section is reduced.

11. The fibrous moldable substrate of Claim 1, wherein the mat experiences insubstantial two-dimensional shrinkage while being subjected to the heat.

12. The fibrous moldable substrate of Claim 1, wherein the fibrous material is selected from a group comprising hemp, kenaf, flax and jute.

13. A fibrous moldable substrate comprising:  
a mat comprising a fibrous material and a binder;  
wherein fibers of the fibrous material are randomly oriented;  
wherein the fibrous material and binder is subjected to heat such that only a portion of the binder is wetted to the fibrous material; and  
wherein the binder become dimensionally stable when cooled.

14. The fibrous moldable substrate of Claim 13, wherein the fibrous material is at least semi-rigid.

15. The fibrous moldable substrate of Claim 12, wherein the fibrous material is hemp.

16. The fibrous moldable substrate of Claim 13, wherein the fibrous material is kenaf.



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17. The fibrous moldable substrate of Claim 13, wherein the fibrous material comprises hemp and kenaf.

18. The fibrous moldable substrate of Claim 17, wherein the fibrous material comprises about 50 weight percent hemp and 50 about weight percent kenaf.

19. The fibrous moldable substrate of Claim 13, wherein the mat comprises about 25 weight percent hemp, about 25 weight percent kenaf and about 50 weight percent the binder.

20. The fibrous moldable substrate of Claim 13, wherein the binder is a thermomelt binder.

21. The fibrous moldable substrate of Claim 20, wherein the binder is polypropylene.

22. The fibrous moldable substrate of Claim 13, wherein the mat comprises about 24.75 weight percent hemp, about 24.75 weight percent kenaf, about 50 weight percent a polypropylene binder material and about 0.05 weight percent maleic anhydride.

23. The fibrous moldable substrate of Claim 13, wherein the mat is subjected to a compression force where its cross-section is reduced.

24. The fibrous moldable substrate of Claim 13, wherein the mat experiences insubstantial two-dimensional shrinkage while being subjected to the heat.

25. The fibrous moldable substrate of Claim 13, wherein the fibrous material is selected from a group comprising hemp, kenaf, flax and jute.



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26. A fibrous moldable substrate comprising:  
a mat comprising a fibrous material and a binder;  
wherein fibers of the fibrous material are randomly oriented;  
wherein the fibrous material and binder is subjected to heat such  
that only a portion of the binder is wetted to the fibrous material; and  
wherein the mat is semipermeable when cooled.